WE CLAIM:

1. A Geneva mechanism for providing intermittent motion, comprising:

a drive gear adapted to receive rotational input, the drive gear having a drive cam structure and a set of drive teeth; and

a driven gear having a driven cam structure and a set of driven teeth, wherein the driven cam structure is adapted to engage the drive cam structure and align the set of drive teeth with the set of driven teeth to position the set of drive teeth to engage the set of driven teeth for selective transmission of the rotational input; wherein the driven gear has an engaged configuration, in which the driven teeth engage the drive teeth to cause the driven gear to counter rotate relative to the drive gear, and further wherein the driven gear has at least two non-rotating configurations, in which the drive cam structure and the driven cam structure are adapted to prevent the driven gear from rotating.

2. The gear system of claim 1, wherein the drive cam structure includes a cam recess region and a drive cam-bearing surface, and wherein the driven cam structure includes at least two bearing surface regions and a cam lobe portion, wherein when the gear system is in the engaged configuration the cam lobe portion engages the cam recess region and aligns the drive teeth and the driven teeth for rotational engagement, and further wherein when the gear system is in either of the non-rotating configurations one of the bearing surface regions slides along the drive cam-bearing surface forming a contact area as the drive gear rotates, preventing the driven gear from rotating.

3. The gear system of claim 2, wherein the cam recess region includes alignment guide surfaces adapted to guide the cam lobe portion into the cam recess and align the drive teeth and the driven teeth for engagement.

4. The gear system of claim 3, wherein the cam recess region includes extended drive teeth formed by a portion of the set of drive teeth, which are longer axially than the remaining drive teeth of the set.

5. The gear system of claim 2, wherein the drive cam-bearing surface includes a surface extension region adapted to increase the contact area between the drive cam-bearing surface and the bearing surface region.

6. The gear system of claim 5, wherein the surface extension region is an axially upstanding arcuate perimeter rim.

7. The gear system of claim 2, wherein the cam lobe portion includes a set of cam lobe teeth formed from a portion of the set of driven teeth, which extend axially from the remaining driven teeth of the set.

8. The gear system of claim 2, wherein the drive cam structure includes a perimeter flange adapted to axially align the drive gear and the driven gear.

9. The gear system of claim 8, wherein the perimeter flange includes the drive cam-bearing surface.

10. The gear system of claim 9, wherein the cam lobe portion is adapted to slidingly engage the drive cam-bearing surface on the perimeter flange when the gear system is in either of the non-rotating configurations.

11. The gear system of claim 2, further comprising an axial alignment structure attached to at least one of the drive gear and driven gear and configured to extend at least partially over the other of the drive gear and driven gear.

12. The gear system of claim 11, wherein the axial alignment structure includes a disk.

13. The gear system of claim 2, wherein at least one of the drive gear and driven gear is plastic.

14. A gear system comprising:

Twin interengaged, motion coupled, substaintially parallel axis rotors operatively mounted for juxtaposed relative intermittent rotation, each rotor including:

a toothed region which lies along an arc that is less than a full circle; and

a cam region including a portion of which lies substantially outside that arc toothed region, said rotors being operatively positioned relative to one another in a manner which enables two different characters of interengaged relative rotating motion, one of said characters involving tooth-region to tooth-region driving interengagement, wherein the two rotors counter rotate relative to one another, with one rotor driving the other rotor, and the other character involving sliding surface to sliding surface, non-driving interengagement, wherein said one rotor rotates and the other rotor is stationary, the first character of interengaged relative rotation motion occurring at a predefined sweep of angular relation between the twin rotors and the second character of interengaged relative rotation motion occurring at two predefined angular relations between the twin rotors positioned on either side of the sweep that defines the first character of interengaged relative rotation.

15. The gear system of claim 14, wherein said toothed regions include portions extending across a common plane which is spaced from and generally normal to said axes.

16. A toy comprising:

a body having a plurality of independently moving parts; and

an animation mechanism adapted to move the independent parts of the body, wherein the animation mechanism includes a motor assembly, a gear assembly, a linkage assembly, and a skeletal structure, wherein the motor assembly includes at least one motor operatively coupled to the gear assembly and adapted to impart rotation thereto, and wherein the gear assembly is operatively coupled to the linkage assembly and adapted to cause the linkage assembly to actuate movement in the skeletal structure; and wherein the gear assembly includes a gear system adapted to provide intermittent actuation of the linkage assembly, the gear system comprising:

a drive gear adapted to receive rotational input, the drive gear having a drive cam structure and a set of drive teeth; and

a driven gear having a driven cam structure and a set of driven teeth, wherein the driven cam structure is adapted to engage the drive cam structure and align the set of drive teeth with the set of driven teeth to position the set of drive teeth to engage the set of driven for selective transmission of the rotational input; wherein the driven gear has an engaged configuration, in which the driven teeth engage the drive teeth to cause the driven gear to counter rotate relative to the drive gear, and further wherein the driven gear has at least two non-rotating configurations, in which the drive cam structure and the driven cam structure are adapted to prevent the driven gear from rotating..

17. The toy of claim 16, wherein the children's toy is a doll.

18. The children's toy of claim 16, wherein the drive cam structure includes a cam recess region and a drive cam-bearing surface, and wherein the driven cam structure includes at least two bearing surface regions and a cam lobe portion, wherein when the gear system is in the engaged configuration the cam lobe portion engages the cam recess region and aligns the drive teeth and the driven teeth for rotational engagement, and further wherein when the gear system is in either of the non-rotating configurations one of the bearing surface regions slides along the drive cam-bearing surface forming a contact area as the drive gear rotates, preventing the driven gear from rotating.

19. The toy of claim 16, wherein the cam recess region includes alignment guide surfaces adapted to guide the cam lobe portion into the cam recess and align the drive teeth and the driven teeth.

20. The toy of claim 19, wherein the cam recess region includes a portion of the set of drive teeth, which are longer axially than the remaining drive teeth of the set.

21. The toy of claim 16, wherein the drive cam-bearing surface includes a surface extension region adapted to increase the size of the contact area between the drive cam-bearing surface and the bearing surface region.

22. The children's toy of claim 21, wherein the surface extension region is an axially upstanding arcuate perimeter rim.

23. The children's toy of claim 16, wherein the cam lobe portion includes a set of cam lobe teeth formed from a portion of the set of driven teeth, which extend axially from the remaining driven teeth of the set.

24. The children's toy of claim 16, wherein the drive cam structure includes a perimeter flange adapted to axially align the drive gear and the driven gear.

25. The children's toy of claim 24, wherein the cam lobe portion is adapted to slidingly engages the perimeter flange when the gear system is in the non-rotating configuration.

26. The children's toy of claim 16, comprising an axial alignment structure attached to at least one of the dive gear and driven gear and configured to extend at least partially over the other of the drive gear and driven gear.

27. The children's toy of claim 26, wherein the axial alignment structure includes a disk.

28. The children's toy of claim 16, wherein at least one of the drive gear and driven gear is plastic.

29. The children's toy of claim 16, wherein the at least one motor is adapted to rotate in a first direction through a defined angular sweep and then rotate in a second direction, opposed to the first direction, through the defined angular sweep.

30. The children's toy of claim 29, wherein the defined angular sweep of the at least one motor rotates the drive gear at most 360 degrees of rotation in either of a first direction and a second direction, before reversing direction.

31. The children's toy of claim 30, wherein the set of drive teeth of the drive gear are positioned along a portion of the perimeter of the drive gear and configured to rotate the driven gear in a first direction during a part of the defined angular sweep of the at least one drive motor and rotate the driven gear in the opposite direction during the defined angular sweep in the second direction.

32. The children's toy of claim 31, wherein the driven gear is mechanically linked to the skeletal structure by a linkage mechanism that causes a portion of the skeletal structure to move when the driven gear rotates.

33. The children's toy of claim 32, wherein the portion of the skeletal structure moved by the drive gear is connected to a moving body part selected from the group consisting of arms, hands, legs, feet, head, eyes, and mouth.

34. A gear system for providing intermittent motion, the system comprising:

a drive gear having a set of drive teeth and a means to selectively engage a set of driven teeth on a corresponding driven gear;

a driven gear having a set of driven teeth a means to align the set of driven teeth with the set of drive teeth of the drive gear; and

at least two rotation locking means for preventing the driven gear from rotating in response to a rotation of the drive gear.